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maximize (through	bioengineering objective gene knockouts)
subject to	maximize cellular objective (over fluxes)
	subject to • fixed substrate uptake • network stoichiometry • blocked reactions identified by outer problem
	number of knockouts ≤ limit

Figure 1

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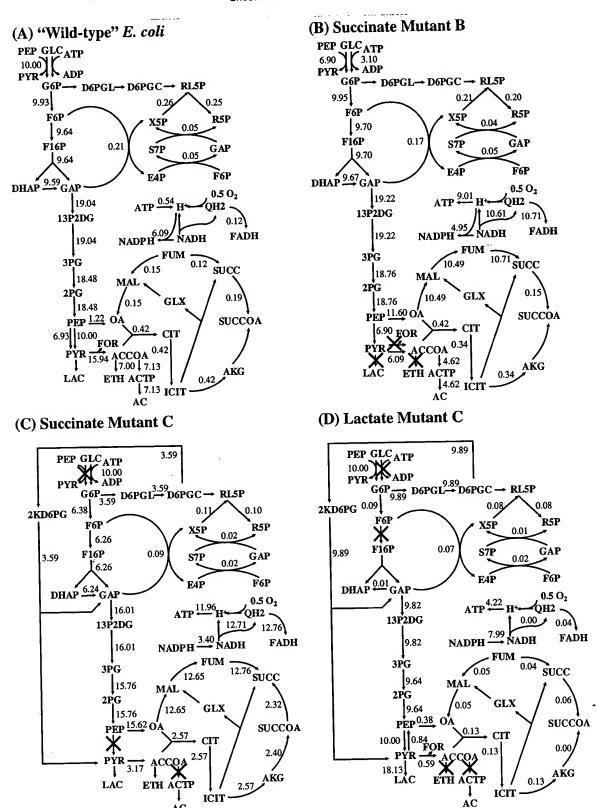
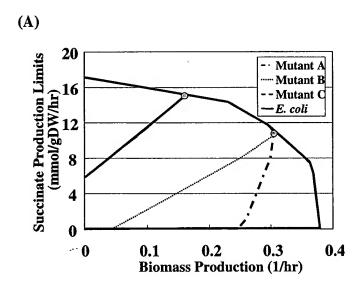


Figure 2

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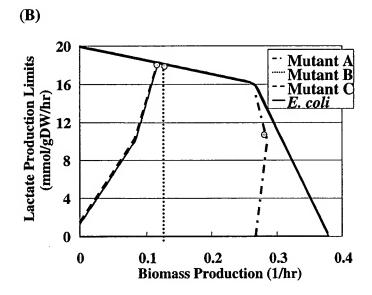
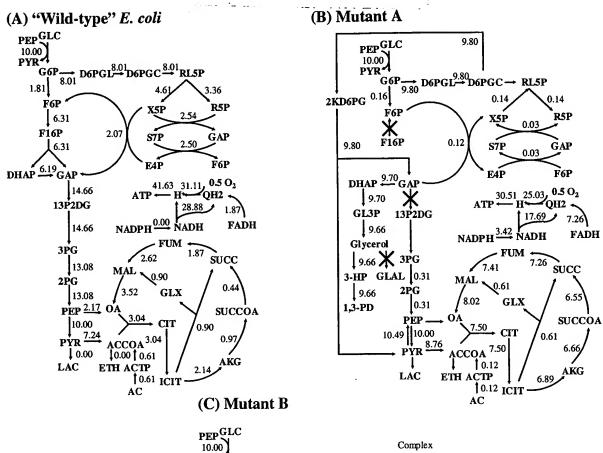


Figure 3

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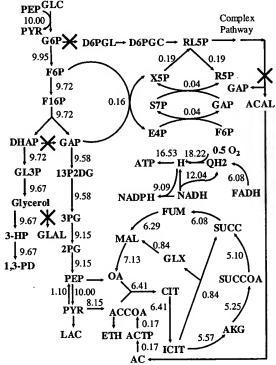


Figure 4

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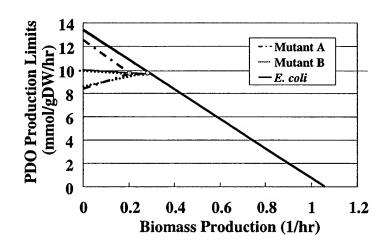


Figure 5

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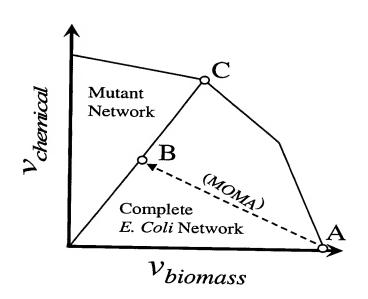


Figure 6